LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION –**PLANT BIOLOGY AND PLANT BIOTECHNOLOGY**

SECOND SEMESTER – **APRIL 2018**

PB 2506– CELL BIOLOGY AND EVOLUTION

Date: 26-04-2018 Dept. No. Max. : 100 Marks

Time: 01:00-04:00

Part –A (20 marks)

ANSWER THE FOLLOWING, EACH WITHIN 50 WORDS ONLY: (10 x 02 = 20)

01. State the working principles of Dark Field Microscope.
02. Define Cell Theory.
03. What are Peroxisomes?
04. What are vesicles?
05. Define Karyotype.
06. What areHistones?
07. Define cell division
08. What is amitosis?
09. Define Evolution.
10. What is Speciation?

Part –B (05 x 07 = 35 marks)

ANSWER THE FOLLOWING, EACH WITHIN 500 WORDS; DRAW DIAGRAMS WHEREVER NECESSARY

11. a) Briefly describe the working principle and application of Fluorescent Microscope.

(OR)

b) Distinguish between Prokaryotic and Eukaryotic cell.

12. a) Describe the structure and function of Endoplasmic reticulum.

(OR)

b) Briefly describe the structure of Nucleus.

13. a) Give an account of lampbrush chromosomes.

(OR)

b) Give an account of Karyotype and Ideogram.

14. a) Explain the various stages of mitosis.

(OR)

b) Write short note on cell cycle.

15. a) Briefly describe the principles of Lamarckism.

(OR)

b) Discuss the theory of natural selection.

Part –C (3 x 15 = 45 marks)

ANSWER ANY THREE OF THE FOLLOWING, EACH WITHIN 1200 WORDS; DRAW DIAGRAMS WHEREVER NECESSARY

16. Explain in detail the principle, working and uses of SEM.
17. Write a detailed account on the ultrastructure of plasma membrane and its functions.
18. Discuss about chromosome structure and its organization.
19. Explain the various stages of meiosis.
20. Write an essay on mutation theory and synthetic theory.

****